

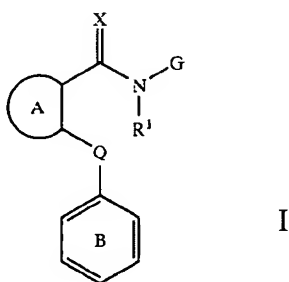
## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

### Listing of Claims:

Please amend the claims as follows:

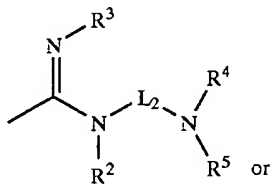
Claim 1. (Presently amended) A compound of formula I:



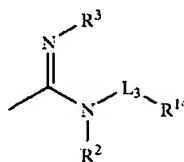
or a pharmaceutically acceptable salt thereof, wherein:

X is oxygen or sulfur;

G is G2 or G3:



G2



G3

L<sub>2</sub> is a C<sub>2-6</sub> alkylidene chain optionally substituted by 1-3 R<sup>6</sup>, wherein the alkylidene chain is optionally interrupted by -C(R<sup>11</sup>)<sub>2</sub>-, -C(R<sup>11</sup>)<sub>2</sub>C(R<sup>11</sup>)<sub>2</sub>-, -C(R<sup>11</sup>)=C(R<sup>11</sup>)-, -C≡C-, -O-, -S-, -N(R<sup>11</sup>)<sub>2</sub>-, -N(R<sup>10</sup>)CO-, -N(R<sup>10</sup>)CO<sub>2</sub>-, -CON(R<sup>10</sup>)-, -C(R<sup>11</sup>)(OR<sup>1</sup>)-, -CO-, -CO<sub>2</sub>-, -OC(=O)-, -OC(=O)N(R<sup>10</sup>)-, -SO-, -SO<sub>2</sub>-, -N(R<sup>10</sup>)SO<sub>2</sub>- or -SO<sub>2</sub>N(R<sup>10</sup>)-, and wherein L<sub>2</sub> or a portion thereof optionally forms part of a 3-7 membered ring;

L<sub>3</sub> is a direct link, a C<sub>0-6</sub> alkylidene chain optionally substituted by 1-3 R<sup>6</sup>, wherein the alkylidene chain is optionally interrupted by -C(R<sup>11</sup>)<sub>2</sub>-, -C(R<sup>11</sup>)<sub>2</sub>C(R<sup>11</sup>)<sub>2</sub>-, -C(R<sup>11</sup>)=C(R<sup>11</sup>)-, -C≡C-, -O-, -S-, -N(R<sup>11</sup>)-, -N(R<sup>10</sup>)CO-, -N(R<sup>10</sup>)CO<sub>2</sub>-, -CON(R<sup>10</sup>)-,

$-\text{C}(\text{R}^{11})(\text{OR}^1)-$ ,  $-\text{CO}-$ ,  $-\text{CO}_2-$ ,  $-\text{OC}(=\text{O})-$ ,  $-\text{OC}(=\text{O})\text{N}(\text{R}^{10})-$ ,  $-\text{SO}-$ ,  $-\text{SO}_2-$ ,  $-\text{N}(\text{R}^{10})\text{SO}_2-$ , or  $-\text{SO}_2\text{N}(\text{R}^{10})-$ , and wherein  $\text{L}_3$  or a portion thereof optionally forms part of a 3-7 membered ring;

$\text{R}^1$  is hydrogen or  $\text{C}_{1-6}$  aliphatic;

each  $\text{R}^2$  is independently selected from hydrogen,  $\text{C}_{1-8}$  aliphatic,  $\text{C}_{6-10}$  aryl,  $\text{C}_{7-10}$  aralkyl, or, when Ring C is a 6-membered aromatic ring  $\text{R}^2$  is a lone electron pair;

$\text{R}^3$  is hydrogen,  $\text{C}_{1-8}$  aliphatic,  $\text{C}_{6-10}$  aryl, or  $\text{C}_{7-10}$  aralkyl;

$\text{R}^4$  is hydrogen,  $\text{C}_{1-8}$  aliphatic,  $\text{C}=\text{O}(\text{C}_{1-8}$  aliphatic),  $\text{CO}_2(\text{C}_{1-8}$  aliphatic),  $\text{C}(=\text{O})\text{N}(\text{R}^{10})(\text{C}_{1-7}$  aliphatic),  $\text{C}_{6-10}$  aryl, heteroaryl,  $\text{C}_{7-12}$  aralkyl, or heteroaralkyl;

$\text{R}^5$  is hydrogen or  $\text{C}_{1-8}$  aliphatic, or  $\text{R}^4$  and  $\text{R}^5$  taken together with their intervening nitrogen form a substituted or unsubstituted, aromatic or non-aromatic, 4-14 membered monocyclic, bicyclic or tricyclic ring system having, in addition to said intervening nitrogen, 0-4 ring heteroatoms selected from nitrogen, sulfur or oxygen;

Ring A is phenyl or thienyl ~~a 5-membered heteroaryl ring or a 6-membered aromatic ring having 0-2 ring nitrogen atoms, wherein Q and  $\text{C}(=\text{X})\text{N}(\text{R}^1)-\text{G}$  are attached at ortho positions on Ring A and wherein Ring A is optionally substituted by one to three  $\text{R}^7$ ;~~

Ring B is phenyl or benzofuranyl, ~~a 6-membered aromatic ring having 0-2 ring nitrogen atoms, wherein Ring B is optionally substituted by one or more  $\text{R}^8$ ;~~

Q is a  $\text{C}_2$ - $\text{C}_4$  alkylidene chain optionally substituted by one to three  $\text{R}^9$ , ~~wherein a methylene unit of the alkylidene chain is optionally replaced by  $-\text{S}-$ ,  $-\text{S}(\text{O})-$ ,  $-\text{SO}_2-$ ,  $-\text{N}(\text{R}^1)-$ ,  $-\text{O}-$ ,  $-\text{C}(\text{O})-$ , or  $-\text{C}(\text{S})-$ ;~~

each  $\text{R}^6$  is independently selected from halo,  $-\text{OR}^1$ ,  $-\text{CN}$ ,  $-\text{C}_{1-6}$  aliphatic,  $-\text{N}(\text{R}^{10})_2$ ,  $-\text{C}=\text{O}(\text{C}_{1-5}$  aliphatic),  $-\text{CO}_2\text{R}^1$ ,  $-\text{CH}_2\text{CO}_2\text{R}^1$ , or  $-\text{C}(=\text{O})\text{N}(\text{R}^{10})(\text{C}_{1-5}$  aliphatic);

each  $\text{R}^7$  is independently selected from -halo,  $-\text{NO}_2$ ,  $-\text{CN}$ , or a substituted or unsubstituted group selected from  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{C}_{6-10}$  aryl, -heterocyclyl, -heteroaryl,  $-\text{C}_{6-10}$  aryl)alkyl, -(heterocyclyl)alkyl, -(heteroaryl)alkyl,  $-\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  $\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})$ .sub- .2,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{SO}_2\text{R}^{12}$ , or  $-\text{C}(=\text{NH})-\text{N}(\text{R}^{10})_2$  or two adjacent  $\text{R}^7$  taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 ring heteroatoms selected from nitrogen, oxygen or sulfur;

each  $R^8$  is independently selected from -halo,  $-NO_2$ ,  $-CN$ , or a substituted or unsubstituted group selected from  $-R^{12}$ ,  $-OR^1$ ,  $-SR^{12}$ ,  $-C_{6-10}$  aryl, -heterocyclyl, -heteroaryl,  $-C_{6-10}$  aryl)alkyl, -(heterocyclyl)alkyl, -(heteroaryl)alkyl,  $-N(R^{10})_2$ ,  $-NR^{10}C(O)R^1$ ,  $-NR^{10}C(O)N(R^{10})_2$ ,  $-NR^{10}CO_2R^{12}$ ,  $-CO_2R^1$ ,  $-C(O)R^1$ ,  $-C(O)N(R^{10})_2$ ,  $-OC(O)N(R^{10})_2$ ,  $-S(O)_2R^{12}$ ,  $-SO_2N(R^{10})_2$ ,  $-S(O)R^{12}$ ,  $-NR^{10}SO_2N(R^{10})_2$ ,  $-NR^{10}SO_2R^{12}$ , or  $-C(=NH)-N(R^{10})_2$ , or two adjacent  $R^8$  taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 ring heteroatoms selected from nitrogen, oxygen or sulfur;

each  $R^9$  is independently selected from halo,  $OR^1$ ,  $CN$ ,  $C_{1-6}$  aliphatic,  $N(R^{10})_2$ ,  $-C(=O)(C_{1-5}$  aliphatic),  $CO_2(C_{1-5}$  aliphatic), or  $C(=O)N(R^{10})(C_{1-5}$  aliphatic), or  $R^9$  and an  $R^7$ , at a position ortho to Q, are taken together with their intervening atoms form a 5-7 membered unsaturated or partially unsaturated ring having 0-2 ring heteroatoms selected from N, O or S;

each  $R^{10}$  is independently selected from hydrogen, a substituted or unsubstituted  $C_{1-8}$  aliphatic group,  $C(=O)R^1$ ,  $CO_2R^1$ ,  $SO_2R^1$ , or two  $R^{10}$  on the same nitrogen taken together with the nitrogen form a 5-8 membered aromatic or non-aromatic ring having, in addition to the nitrogen, 0-2 ring heteroatoms selected from N, O, or S;

each  $R^{11}$  is independently selected from hydrogen,  $CO_2R^{12}$ ,  $CON(R^{12})_2$ ,  $OR^{12}$ , or a substituted or unsubstituted  $C_{1-8}$  aliphatic group;

each  $R^{12}$  is independently selected from a substituted or unsubstituted  $C_{1-8}$  aliphatic group;

and  $R^{14}$  is hydrogen,  $C_{1-8}$  aliphatic,  $C_{6-10}$  aryl, heteroaryl,  $C_{7-12}$  aralkyl, heteroaralkyl, heterocyclyl, or  $R^3$  and  $R^{14}$  taken together with their intervening nitrogens form a substituted or unsubstituted, aromatic or non-aromatic, 4-14 membered monocyclic, bicyclic or tricyclic ring system having, in addition to said intervening nitrogen, 0-4 ring heteroatoms selected from nitrogen, sulfur or oxygen; with the proviso that  $L_3-R^{14}$ , taken together is not H.

Claims 2-6 (Canceled)

Claim 7. (Presently amended) The compound or salt of claim 1 wherein G is G2.

Claim 8. (Presently amended) The compound or salt of claim 7 having one or more features selected from the group consisting of:

- (a) X is oxygen;
- (b) L<sub>2</sub> is a C<sub>3-4</sub> alkylidene chain;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) (i) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-4</sub> aliphatic group, or (ii) R<sup>4</sup> And R<sup>5</sup> taken together with their intervening nitrogen form a 5-6 membered ring, or (iii) R<sup>5</sup> is a C<sub>1-4</sub> aliphatic group and R<sup>4</sup> is aryl, aralkyl, heteroaryl, or heteroaralkyl; and
- (e) ~~Ring A is an optionally substituted phenyl or thienyl; and~~
- ~~(f) Ring B is a substituted phenyl or naphthyl.~~

Claim 9. (Presently amended) The compound or salt of claim 7 wherein:

- (a) X is oxygen;
- (b) L<sub>2</sub> is a C<sub>3-4</sub> alkylidene chain;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) (i) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-4</sub> aliphatic group, or (ii) R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a 5-6 membered ring, or (iii) R<sup>5</sup> is a C<sub>1-4</sub> aliphatic group and R<sup>4</sup> is aryl, aralkyl, heteroaryl, or heteroaralkyl;
- (e) Ring A is phenyl or thienyl; and
- (f) Ring B is phenyl ~~or naphthyl~~.

Claim 10. (Presently amended) The compound or salt of claim 7 having one or more features selected from the group consisting of:

- (a) X is oxygen;
- (b) L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>- or -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-3</sub> aliphatic group or R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a piperidinyl, pyrrolidinyl, piperazinyl or morpholinyl ring; and
- (e) ~~Ring A is an optionally substituted phenyl or thienyl; and~~
- ~~(f) Ring B is a substituted phenyl or naphthyl.~~

Claim 11. (Presently amended) The compound or salt of claim 7 wherein:

- (a) X is oxygen;
- (b) L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>- or -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) R<sup>4</sup> and R<sup>5</sup> are each independently selected from a C<sub>1-3</sub> aliphatic group or R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a piperidinyl, pyrrolidinyl, piperazinyl or morpholinyl ring; and
- (e) ~~Ring A is an optionally substituted phenyl or thienyl; and~~
- ~~(f) Ring B is a substituted phenyl or naphthyl.~~

Claim 12. (Presently amended) The compound or salt of claim 1 wherein G is G3.

Claim 13. (Presently amended) The compound or salt of claim 12 having one or more features selected from the group consisting of:

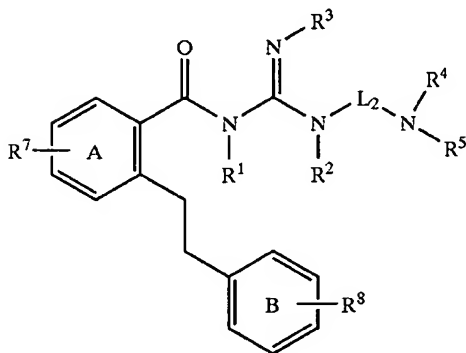
- (a) X is oxygen;
- (b) L<sub>3</sub> is selected from a direct link, -CH<sub>2</sub>-, -CH(R<sup>6</sup>)-, -CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;
- (c) Q is -CH<sub>2</sub>CH<sub>2</sub>-;
- (d) R<sup>5</sup> is C<sub>1-3</sub> alkyl, CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1-6</sub>alkyl), CH<sub>2</sub>CO<sub>2</sub>H, or CH<sub>2</sub>CO<sub>2</sub>(C<sub>1-6</sub> alkyl);
- (e) R<sup>14</sup> is selected from a C<sub>1-6</sub> aliphatic group or a 5-6 membered heterocyclic ring; and
- (f) ~~Ring A is an optionally substituted phenyl or thienyl; and~~
- ~~(g) Ring B is a substituted phenyl or naphthyl.~~

Claim 14. (Presently amended) The compound or salt of claim 12 having one or more features selected from the group consisting of:

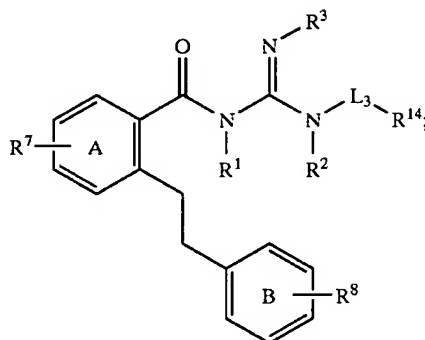
- (a) X is oxygen;
- (b) L<sub>3</sub> is -CH<sub>2</sub>- or -CH(R<sup>6</sup>)-;
- (c) R<sup>6</sup> is C<sub>1-3</sub> alkyl, CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1-6</sub> alkyl), CH<sub>2</sub>CO<sub>2</sub>H, or CH<sub>2</sub>CO<sub>2</sub>(C<sub>1-6</sub> alkyl);
- (d) R<sup>14</sup> is a 5-6 membered heterocyclic ring having a ring nitrogen and 0-1 additional ring heteroatoms selected from N, O or S;

- (e) Q is  $-\text{CH}_2\text{CH}_2-$ ; and  
(f) ~~Ring A is an optionally substituted phenyl or thienyl; and~~  
~~(g) Ring B is a substituted phenyl or naphthyl.~~

Claim 15. (Presently amended) The compound or salt of claim 1 represented by formulae II-C or II-D:



II-C



II-D

wherein:

$\text{R}^1$  and  $\text{R}^2$  are each hydrogen;

$\text{R}^3$  is hydrogen;

~~$\text{L}_4$  is  $-\text{CH}_2\text{CH}_2-$  or  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ;~~

$\text{L}_2$  is  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2-$ , or  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{CH}_2$ ;

$\text{L}_3$  is a direct link,  $-\text{CH}_2-$ ,  $-\text{CH}(\text{R}^6)-$ ,  $-\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ , or  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$\text{R}^6$  is  $\text{C}_{1-3}$  alkyl,  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_{1-6}$  alkyl),  $\text{CH}_2\text{CO}_2\text{H}$ , or  $\text{CH}_2\text{CO}_2(\text{C}_{1-6}$  alkyl);

$\text{R}^7$  is absent or is one to three of -halo,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{C}_{6-10}$  aryl, -

heterocyclyl, -heteroaryl,  $-(\text{C}_{6-10}$  aryl)alkyl, -(heterocyclyl)alkyl, -(heteroaryl)alkyl, -

$\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ , -

$\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ , -

$\text{NR}^{10}\text{SO}_2\text{R}^{12}$ , or  $-\text{C}(=\text{NH})-\text{N}(\text{R}^{10})_2$ ; ~~or two adjacent  $\text{R}^7$  taken together with their~~

~~intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having~~

~~0-2 heteroatoms selected from nitrogen, oxygen or sulfur;~~

$\text{R}^8$  is one or more of -halo,  $-\text{NO}_2$ ,  $-\text{CN}$ , or a substituted or unsubstituted group selected from

$-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{C}_{6-10}$  aryl, -heterocyclyl, -heteroaryl,  $-(\text{C}_{6-10}$  aryl)alkyl, -

(heterocyclyl)alkyl, -heteroaryl)alkyl,  $-\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ , -

$\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{SO}_2\text{R}^{12}$ , or  $-\text{C}(=\text{NH})-\text{N}(\text{R}^{10})_2$ , or two adjacent  $\text{R}^8$  taken together with their intervening atoms form a ~~5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen or sulfur~~ furan ring;

$\text{R}^4$  and  $\text{R}^5$  (i) are each independently selected from a  $\text{C}_{1-4}$  aliphatic group, or (ii)  $\text{R}^4$  and  $\text{R}^5$  taken together with their intervening nitrogen form a 5-6 membered ring, or (iii)  $\text{R}^4$  is a  $\text{C}_{1-4}$  aliphatic group and  $\text{R}^5$  is aryl, aralkyl, heteroaryl, or heteroaralkyl;

$\text{R}^{14}$  is a  $\text{C}_{1-6}$  aliphatic or 5-6 membered heterocyclic ring or  ~~$\text{R}^{13}$~~   $\text{R}^3$  and  $\text{R}^{14}$  taken together with their intervening nitrogens form a 4-6 membered ring;

each  $\text{R}^{10}$  is independently selected from hydrogen, a substituted or unsubstituted  $\text{C}_{1-8}$  aliphatic group,  $\text{C}(=\text{O})\text{R}^1$ ,  $\text{CO}_2\text{R}^1$ ,  $\text{SO}_2\text{R}^1$ , or two  $\text{R}^{10}$  on the same nitrogen taken together with the nitrogen form a 5-8 membered aromatic or non-aromatic ring having, in addition to the nitrogen, 0-2 ring heteroatoms selected from N, O, or S;

~~each  $\text{R}^{11}$  is independently selected from hydrogen or an optionally substituted  $\text{C}_{1-8}$  aliphatic group;~~ and

each  $\text{R}^{12}$  is independently selected from a substituted or unsubstituted  $\text{C}_{1-8}$  aliphatic group.

Claim 16. (Presently amended)      The compound or salt of claim 15 wherein:

$\text{R}^1$  and  $\text{R}^2$  are each hydrogen;

$\text{R}^3$  is hydrogen;

~~$\text{L}_1$  is  $-\text{CH}_2\text{CH}_2-$  or  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ;~~

$\text{L}_2$  is  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2-$ , or  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$\text{L}_3$  is a direct link,  $-\text{CH}_2-$ ,  $-\text{CH}(\text{R}^6)-$ ,  $-\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ , or  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ;

$\text{R}^6$  is  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_{1-6} \text{ alkyl})$ ,  $\text{CH}_2\text{CO}_2\text{H}$ , or  $\text{CH}_2\text{CO}_2(\text{C}_{1-6} \text{ alkyl})$ ;

$\text{R}^7$  is absent or is -halo,  $-\text{CN}$ ,  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,  $-\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{C}(\text{O})\text{R}^1$ ,

$-\text{NR}^{10}\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $[-\text{OC}(\text{O})\text{N}(\text{R}^{11})_2-]$ ,  $-\text{OC}(\text{O})\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ , or  $-\text{NR}^{10}\text{SO}_2\text{R}^{12}$ ;

$\text{R}^8$  is -halo,  $-\text{CN}$ , or a substituted or unsubstituted group selected from  $-\text{R}^{12}$ ,  $-\text{OR}^1$ ,  $-\text{SR}^{12}$ ,

$-\text{N}(\text{R}^{10})_2$ ,  $-\text{NR}^1$ ,  $-\text{C}(\text{O})\text{R}^1$ ,  $-\text{NR}^{10}\text{CO}_2\text{R}^{12}$ ,  $-\text{CO}_2\text{R}^1$ ,  $-\text{C}(\text{O})$ ,  $-\text{C}(\text{O})\text{N}(\text{R}^{10})_2$ ,

$-\text{OC}(\text{O})\text{N}(\text{R}^{10})\text{R}^{12}$ ,  $-\text{S}(\text{R}^{10})_2\text{R}^{12}$ ,  $-\text{SO}_2\text{N}(\text{R}^{10})_2$ ,  $-\text{S}(\text{O})\text{R}^{12}$ ,  $-\text{NR}^{10}\text{SO}_2\text{N}(\text{R}^{10})_2$ , or

$\text{-NR}^{10}\text{SO}_2\text{R}^{12}$ , or two adjacent  $\text{R}^8$  taken together with their intervening atoms form a ~~5-6~~ 5-6 membered unsaturated or partially unsaturated ring having ~~0-2~~ 0-2 heteroatoms selected from ~~nitrogen, oxygen or sulfur~~ furan ring;

$\text{R}^4$  and  $\text{R}^5$  are each independently selected from  $\text{C}_{1-3}$  alkyl or  $\text{R}^4$  and  $\text{R}^5$  taken together with their intervening nitrogen form a 5-6 membered ring;

$\text{R}^{14}$  is a  $\text{C}_{1-6}$  aliphatic or a 5-6 membered heterocyclic ring having a ring nitrogen and 0-1 additional ring heteroatoms selected from N, O or S;

each  $\text{R}^{10}$  is hydrogen;

each  $\text{R}^{11}$  is ~~independently selected from hydrogen or an optionally substituted  $\text{C}_{1-5}$  aliphatic group~~; and

each  $\text{R}^{12}$  is independently selected from a substituted or unsubstituted  $\text{C}_{1-5}$  aliphatic group.

Claim 17. (Presently amended) The compound or salt of claim 16 wherein:

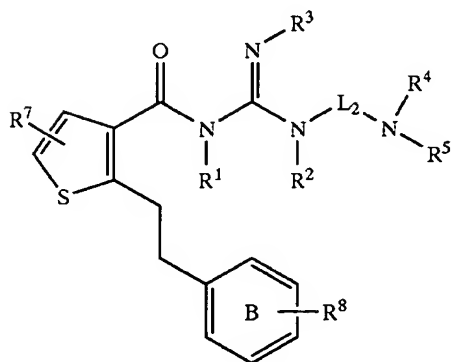
$\text{R}^7$  is absent or is halo;

Ring B is a phenyl ring having two  $\text{R}^8$  substituents that are para to one another ~~or Ring B is a naphthyl ring~~; and

each  $\text{R}^8$  is independently selected from halo,  $\text{C}_{1-4}$  alkyl,  $\text{C}_{1-3}$  alkoxy,  $\text{CO}(\text{C}_{1-3}$  alkyl),  $\text{CONH}(\text{C}_{1-3}$  alkyl),  $\text{SO}_2(\text{C}_{1-3}$  alkyl), or  $\text{SO}_2\text{NH}(\text{C}_{1-3}$  alkyl).

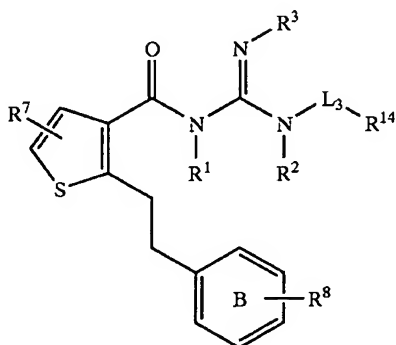
Claim 18. (Presently Amended) The compound or salt of claim 1 represented by formulae ~~III~~ III-C or III-D:

III-A



III-C

III-B



III-D

or



wherein:

R<sup>1</sup>, and R<sup>2</sup> are each hydrogen;

R<sup>3</sup> is hydrogen;

~~L<sub>1</sub> is -CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;~~

L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-, or -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;

L<sub>3</sub> is a direct link, -CH<sub>2</sub>-, or -CH<sub>2</sub>CH<sub>2</sub>-;

R<sup>7</sup> is absent or is one to three -halo, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, or -C(O)N(R<sup>10</sup>)<sub>2</sub>, ~~or two adjacent R<sup>7</sup> taken together with their intervening atoms form a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen or sulfur;~~

R<sup>8</sup> is one or more -halo, -NO<sub>2</sub>, -CN, or a substituted or unsubstituted group selected from -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>, -C<sub>6-10</sub> aryl, -heterocyclyl, -heteroaryl, -(C<sub>6-10</sub> aryl)alkyl, - (heterocyclyl)alkyl, -heteroaryl)alkyl, -N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>C(O)R<sup>1</sup>, -NR<sup>10</sup>C(O)N(R<sup>10</sup>)<sub>2</sub>, - NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, -C(O)N(R<sup>10</sup>)<sub>2</sub>, -OC(O)N(R<sup>10</sup>)<sub>2</sub>, -S(O)<sub>2</sub>R<sup>12</sup>, - SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>, -NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>, ~~or~~ -C(=NH)-N(R<sup>10</sup>)<sub>2</sub>, or two adjacent R<sup>8</sup> taken together with their intervening atoms form a ~~5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen or sulfur~~ furan ring;

R<sup>4</sup> and R<sup>5</sup> are each independently selected from C<sub>1-3</sub> alkyl or R<sup>4</sup> and R<sup>5</sup> taken together with their intervening nitrogen form a 5-6 membered ring;

R<sup>14</sup> is a C<sub>1-6</sub> aliphatic or a 5-6 membered heterocyclic ring having a ring nitrogen and 0-1 additional ring heteroatoms selected from N, O or S;

each R<sup>10</sup> is independently selected from hydrogen, a substituted or unsubstituted C<sub>1-8</sub> aliphatic group, C(=O)R<sup>1</sup>, CO<sub>2</sub>R<sup>1</sup>, SO<sub>2</sub>R<sup>1</sup>, or two R<sup>10</sup> on the same nitrogen taken together with the nitrogen form a 5-8 membered aromatic or non-aromatic ring having, in addition to the nitrogen, 0-2 ring heteroatoms selected from N, O, or S;

~~each R<sup>11</sup> is independently selected from hydrogen or an optionally substituted C<sub>1-8</sub> aliphatic group;~~ and

each R<sup>12</sup> is independently selected from a substituted or unsubstituted C<sub>1-8</sub> aliphatic group.

Claim 19. (Presently Amended)      The compound or salt of claim 18 wherein:

R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are each hydrogen;

~~L<sub>1</sub> is -CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-;~~

L<sub>2</sub> is -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>-, or  
-CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>;

L<sub>3</sub> is a direct link, -CH<sub>2</sub>-, or -CH<sub>2</sub>CH<sub>2</sub>-;

R<sup>7</sup> is absent;

R<sup>8</sup> is -halo, -CN, or a substituted or unsubstituted group selected from -R<sup>12</sup>, -OR<sup>1</sup>, -SR<sup>12</sup>,  
-N(R<sup>10</sup>)<sub>2</sub>, -NR<sup>10</sup>C(O)R<sup>1</sup>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>12</sup>, -CO<sub>2</sub>R<sup>1</sup>, -C(O)R<sup>1</sup>, -O(O)N(R<sup>10</sup>)<sub>2</sub>,  
-OC(O)N(R<sup>10</sup>)<sub>2</sub>, -S(O)<sub>2</sub>R<sup>12</sup>, -SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, -S(O)R<sup>12</sup>, -NR<sup>10</sup>SO<sub>2</sub>N(R<sup>10</sup>)<sub>2</sub>, or -NR<sup>10</sup>SO<sub>2</sub>R<sup>12</sup>,  
or two adjacent R<sup>8</sup> taken together with their intervening atoms form a ~~5-6 membered~~  
~~unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen,~~  
~~oxygen or sulfur~~ furan ring;

R<sup>4</sup> and R<sup>5</sup> are each independently selected from C<sub>1-3</sub> alkyl or R<sup>4</sup> and R<sup>5</sup> taken together with  
their intervening nitrogen form a 5-6 membered ring;

R<sup>14</sup> is a C<sub>1-6</sub> aliphatic or a 5-6 membered heterocyclic ring having a ring nitrogen and 0-1  
additional ring heteroatoms selected from N, O or S;

each R<sup>10</sup> is hydrogen;

~~each R<sup>11</sup> is independently selected from hydrogen or an optionally substituted C<sub>1-5</sub> aliphatic~~  
~~group;~~ and

each R<sup>12</sup> is independently selected from a substituted or unsubstituted C<sub>1-5</sub> aliphatic group.

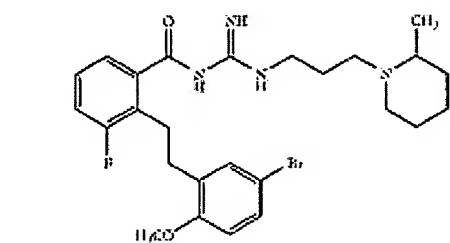
Claim 20. (Presently amended)      The compound or salt of claim 18 wherein:

Ring B is a phenyl ring having two R<sup>8</sup> substituents that are para to one another ~~or Ring B is a~~  
~~naphthyl ring;~~ and

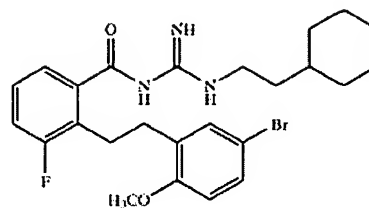
each R<sup>8</sup> is independently selected from halo, C<sub>1-4</sub> alkyl, C<sub>1-3</sub> alkoxy, CO(C<sub>1-3</sub> alkyl),  
CONH(C<sub>1-3</sub> alkyl), SO<sub>2</sub>(C<sub>1-3</sub> alkyl), or SO<sub>2</sub>NH(C<sub>1-3</sub> alkyl).

Claim 21. (Presently Amended)  
group consisting of:

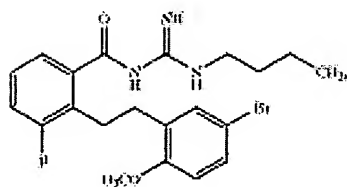
A compound according to claim 1 selected from the



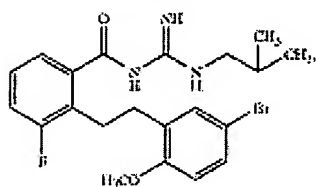
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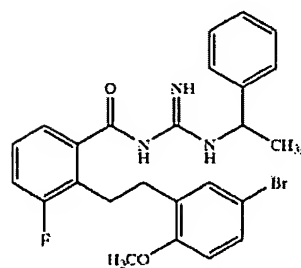
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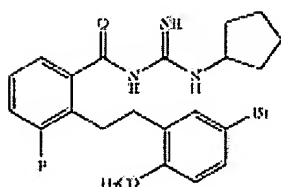
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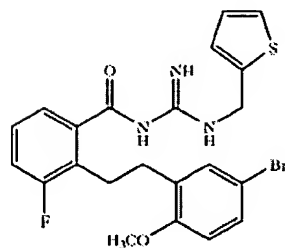
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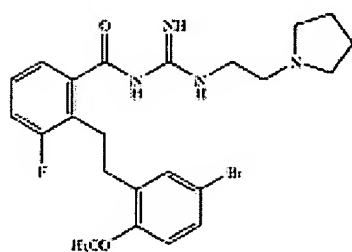
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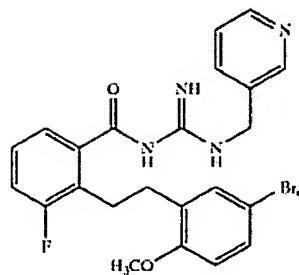
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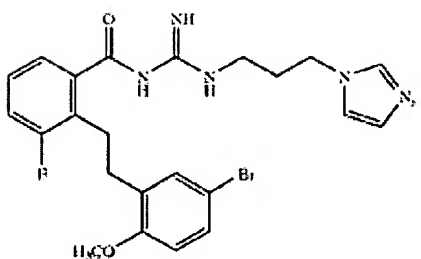
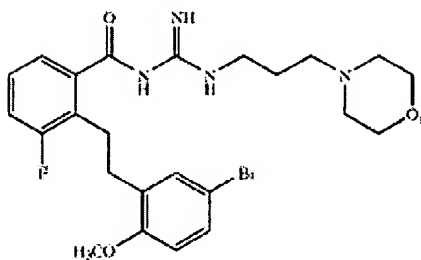
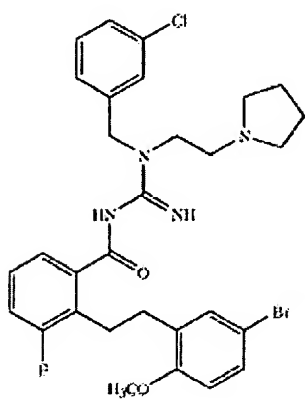
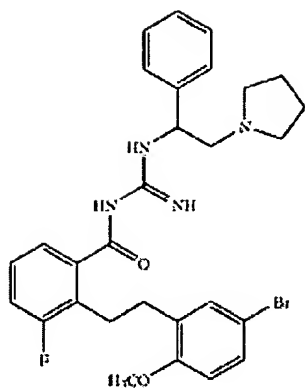
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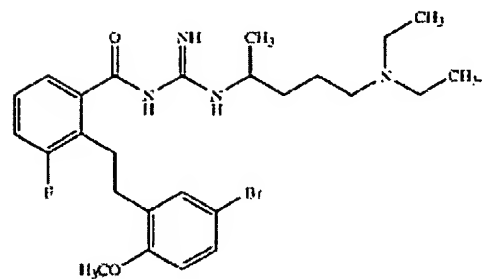
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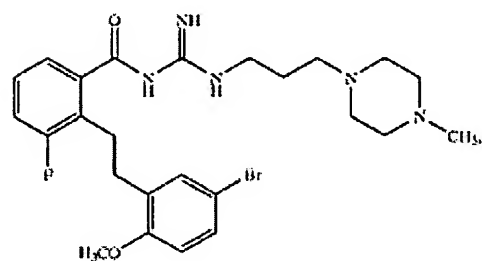


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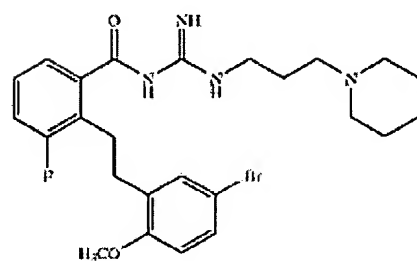
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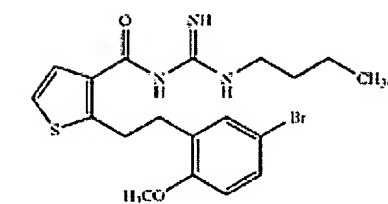
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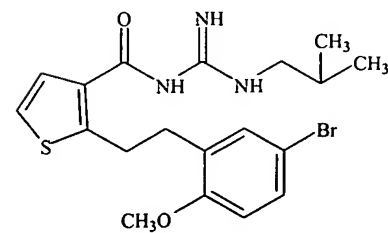
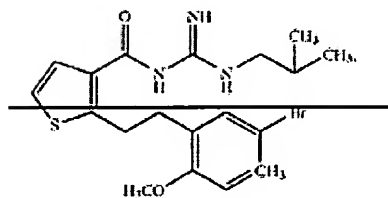


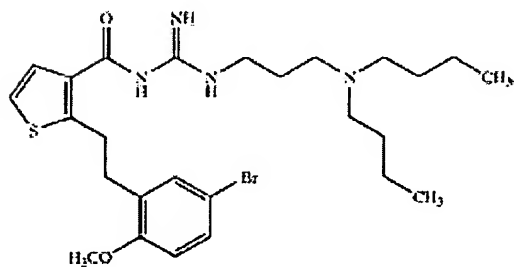
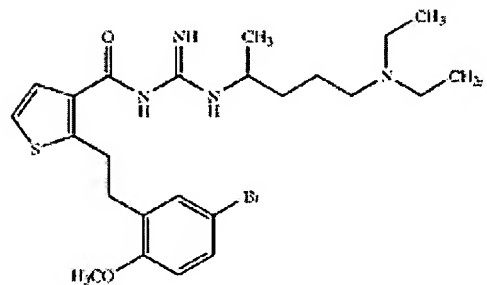
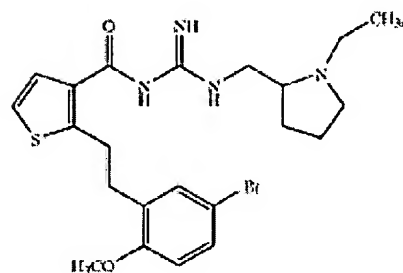
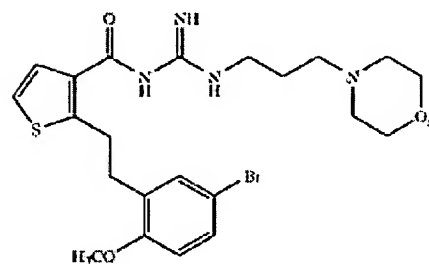
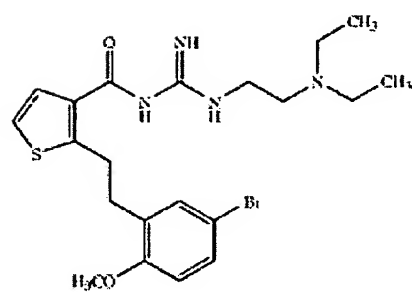
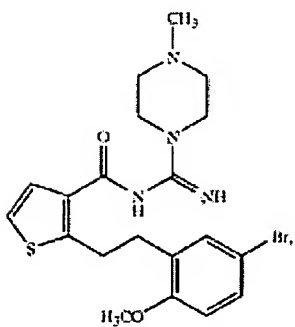
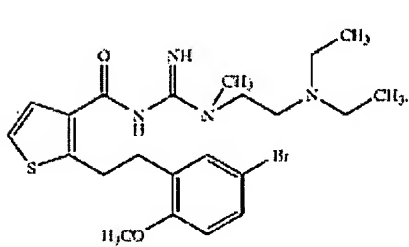
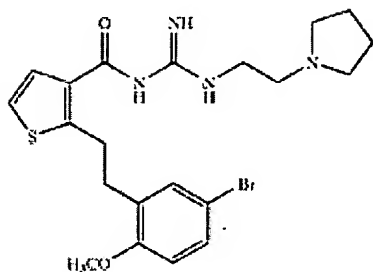
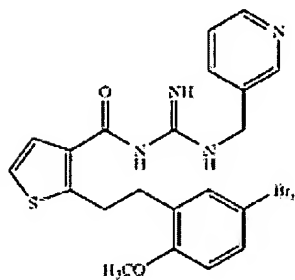
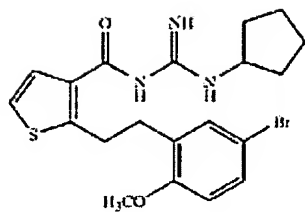
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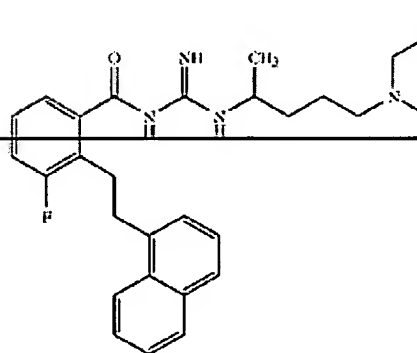
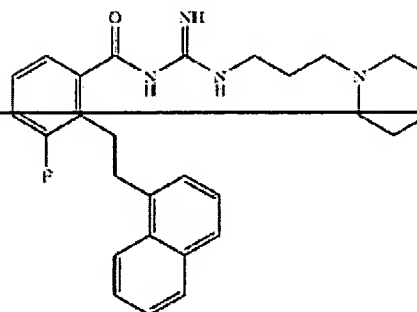
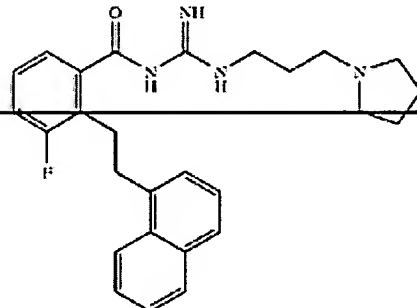
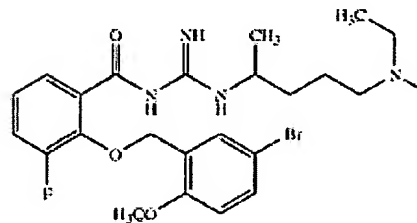
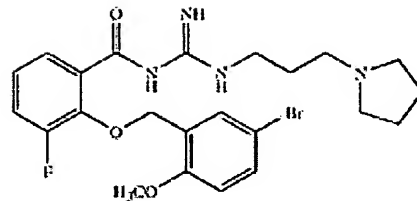
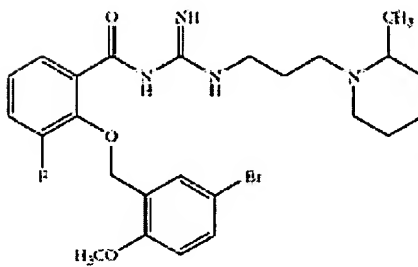
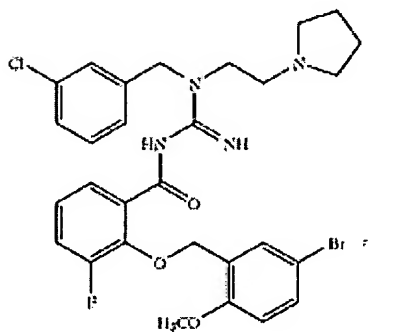
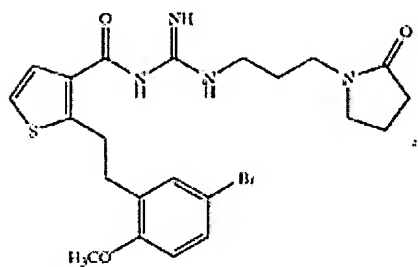
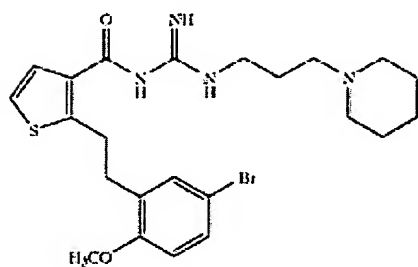
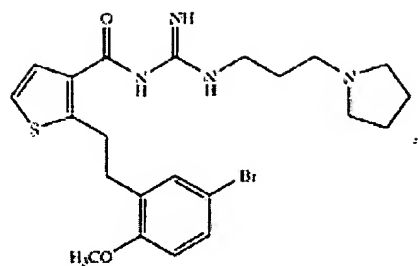
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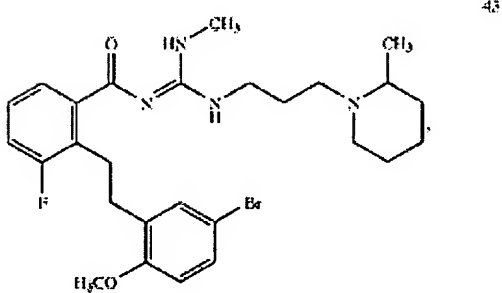
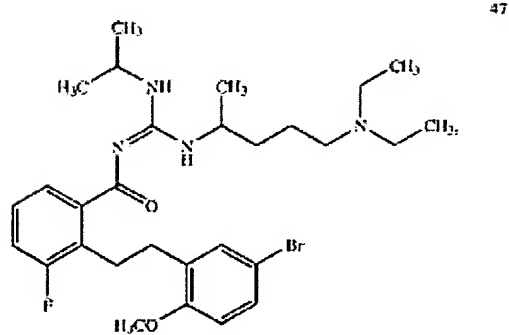
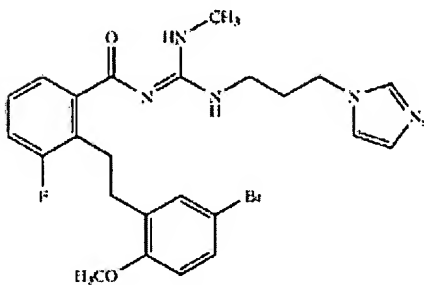
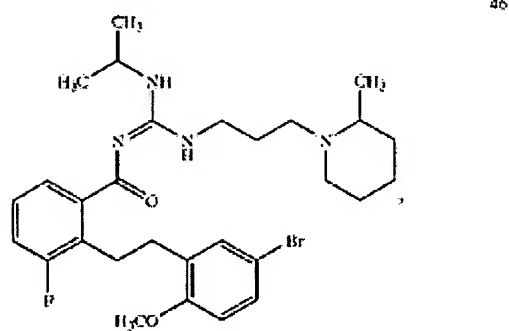
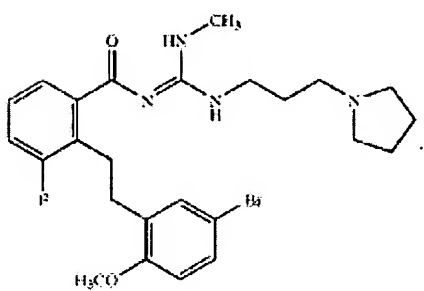
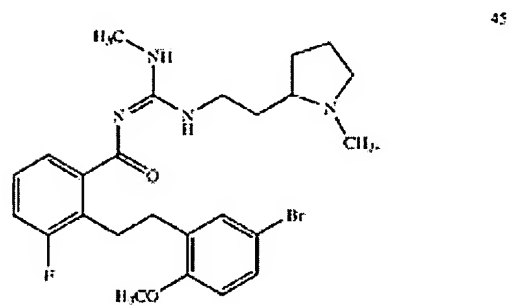
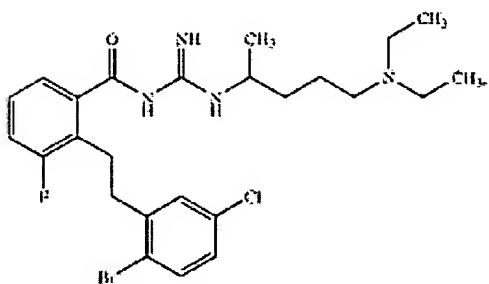
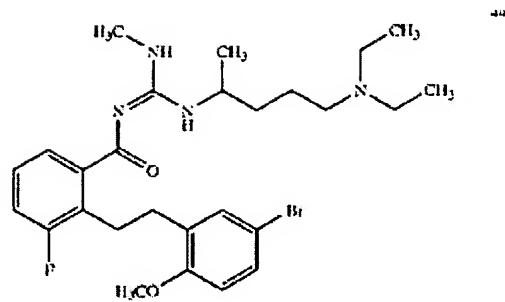
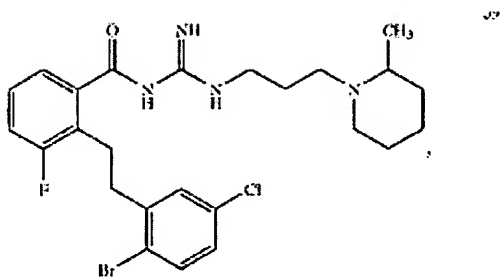


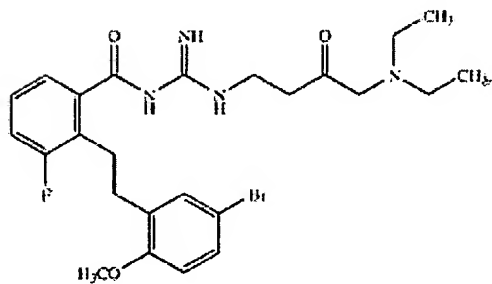
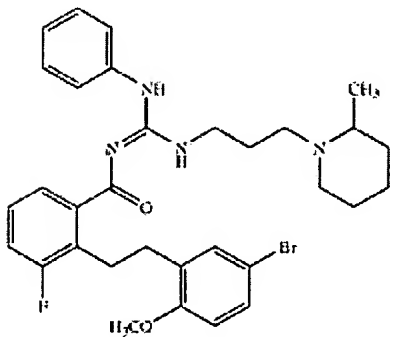
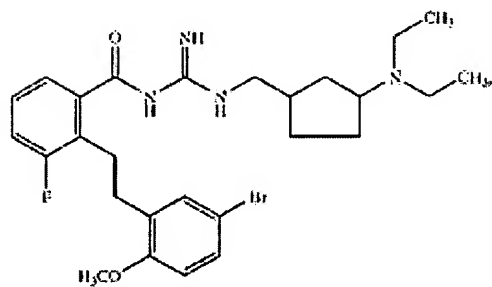
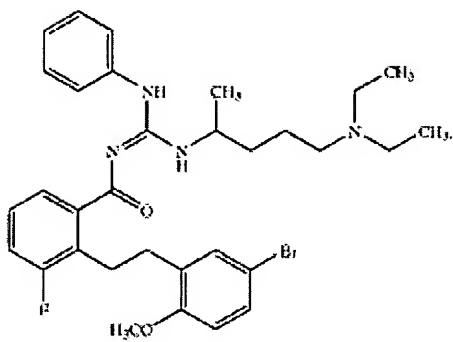
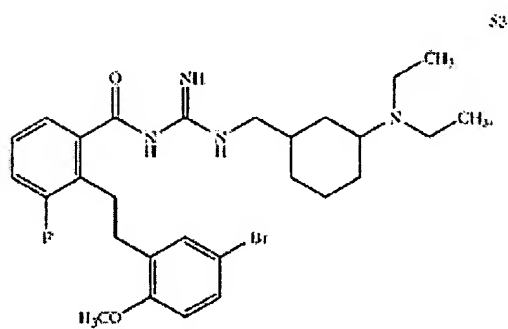
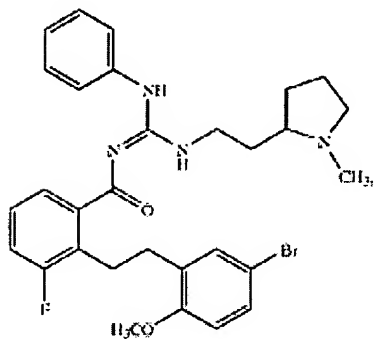
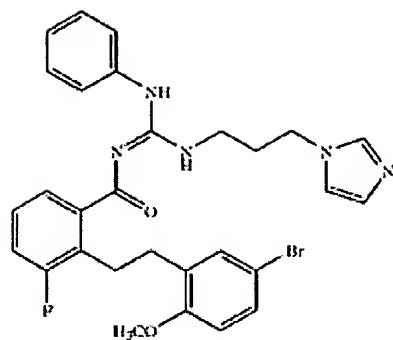
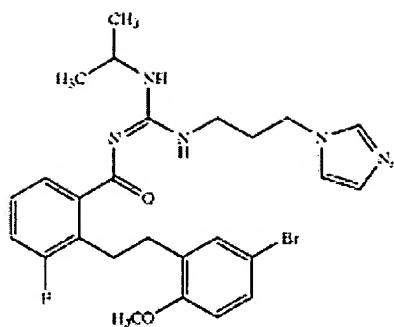
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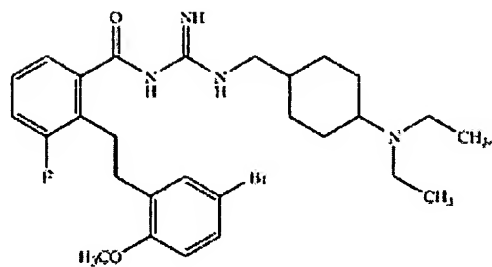






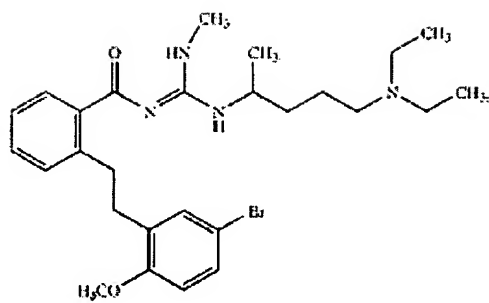


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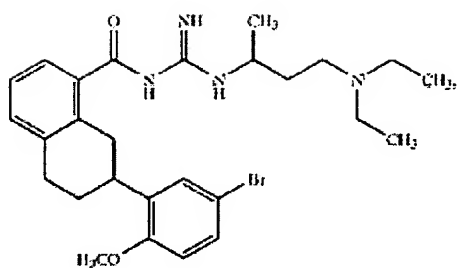


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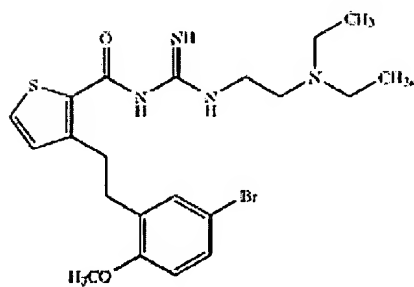
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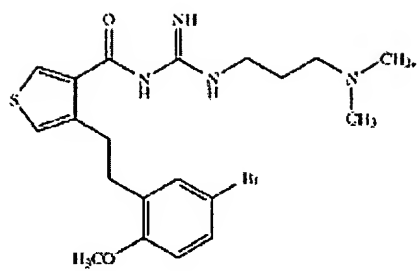


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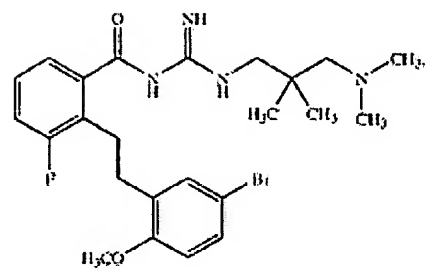


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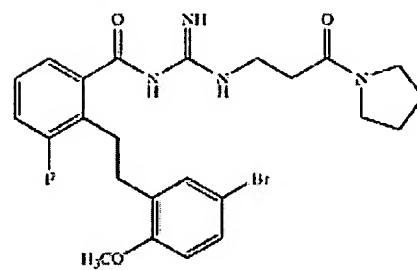




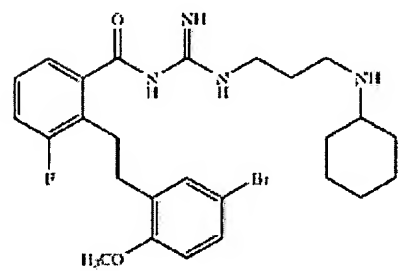
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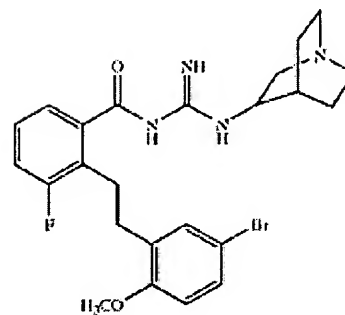
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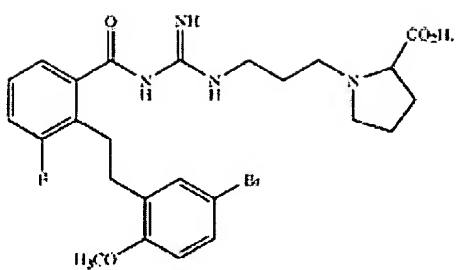
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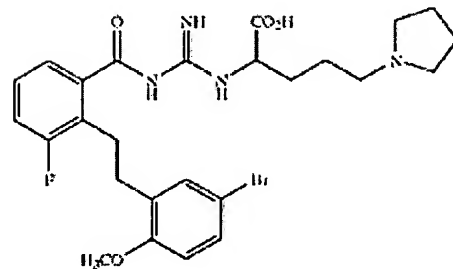
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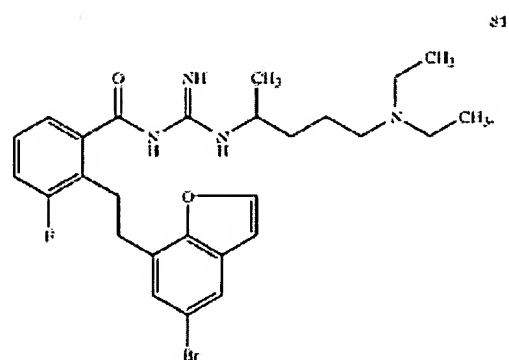
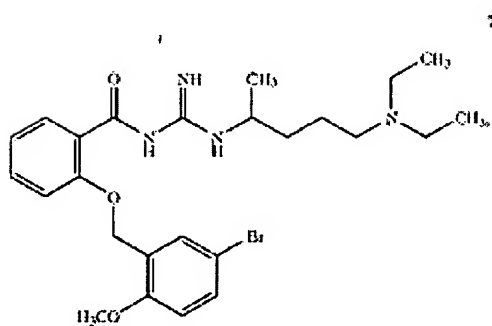
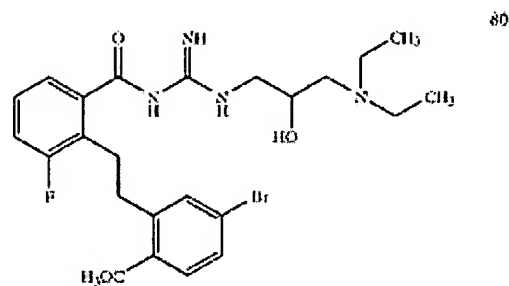
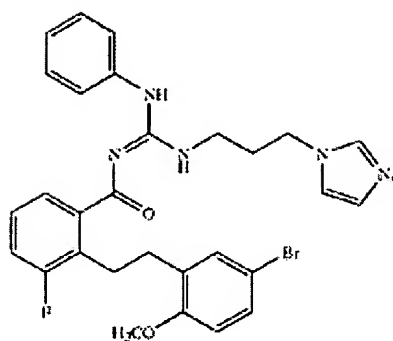
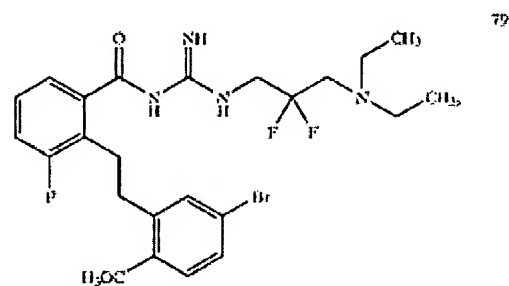
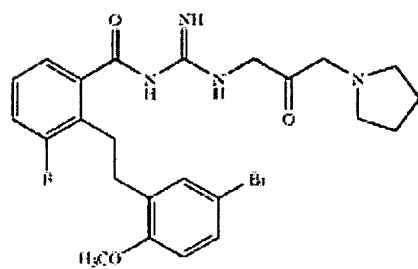
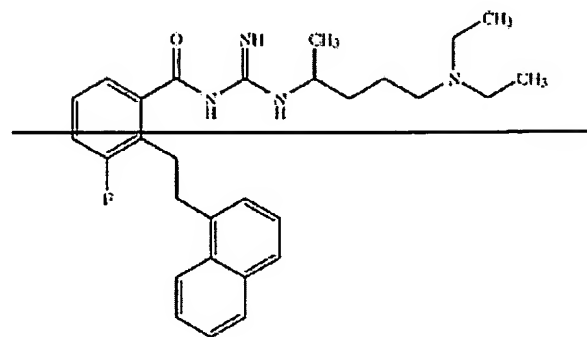
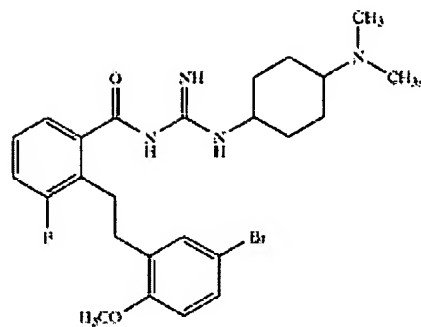


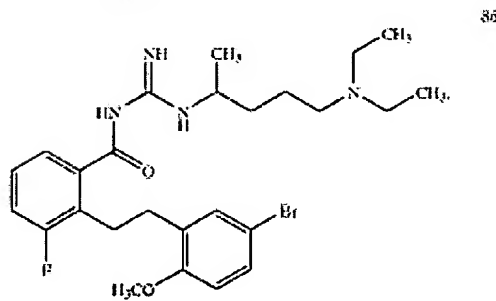
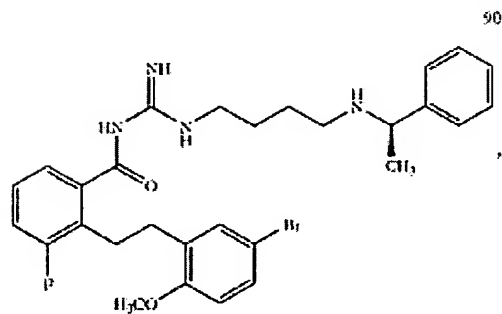
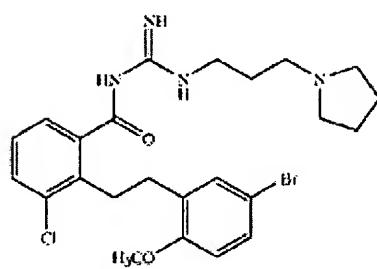
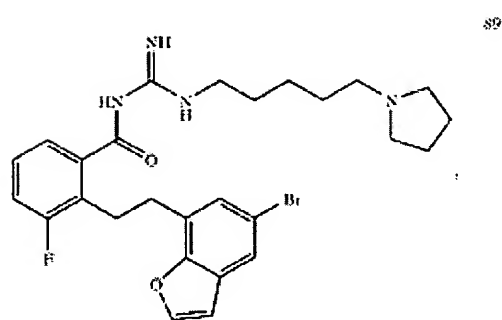
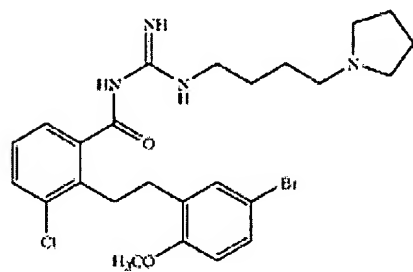
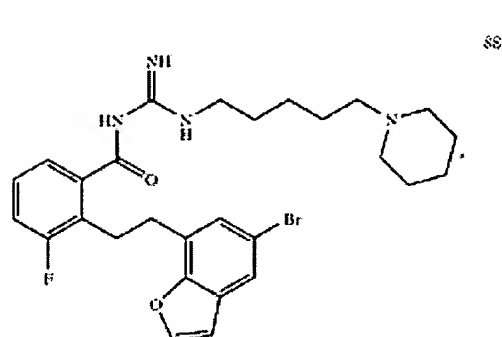
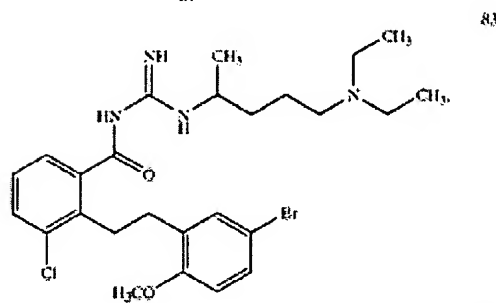
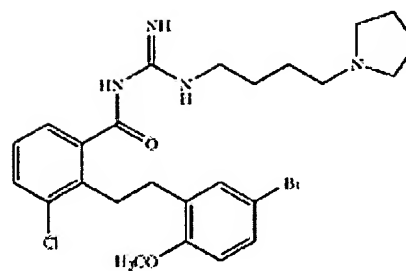
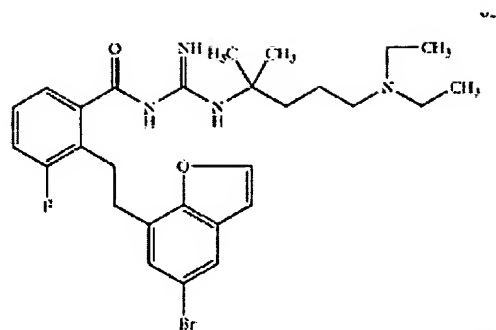
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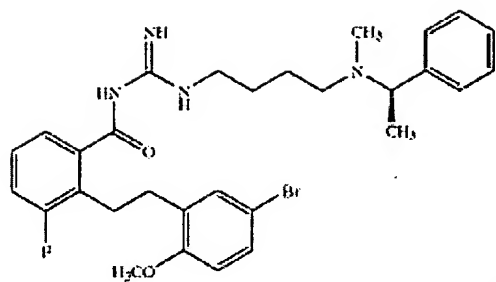


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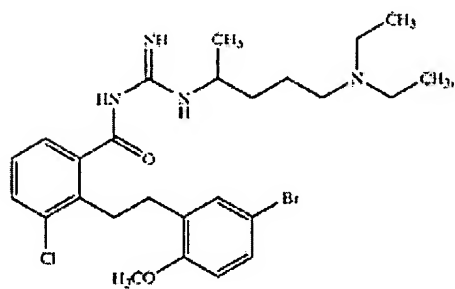




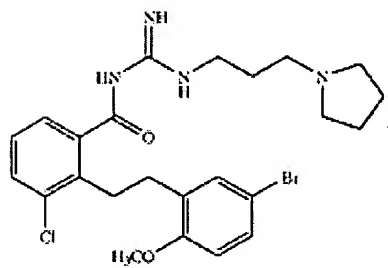




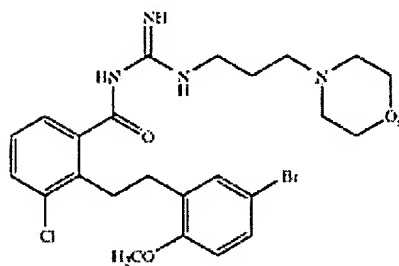
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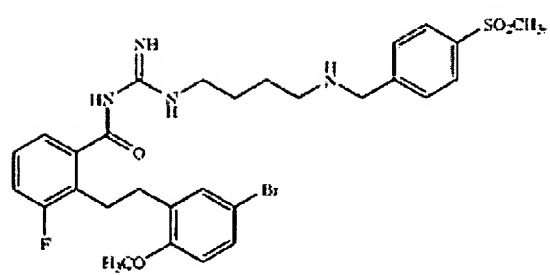
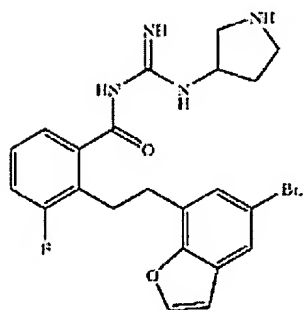
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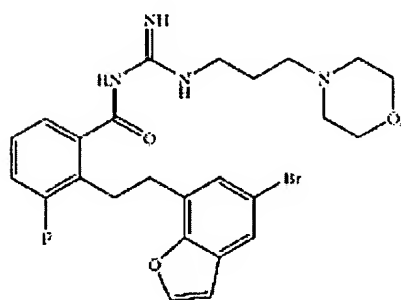
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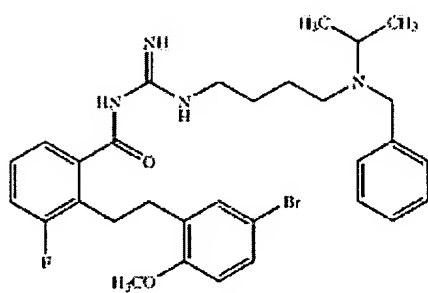
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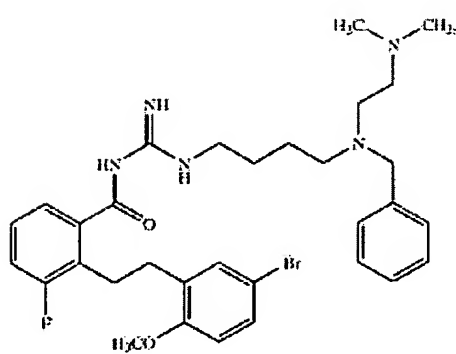
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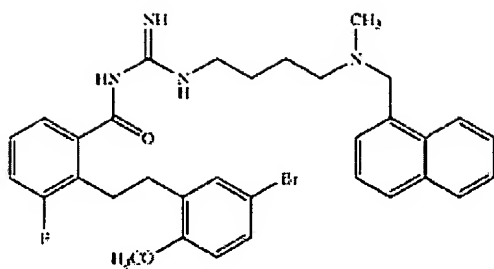
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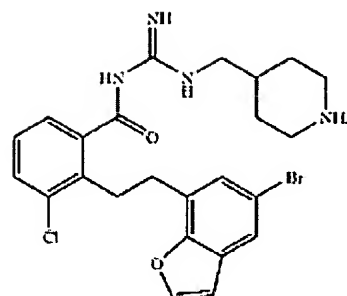
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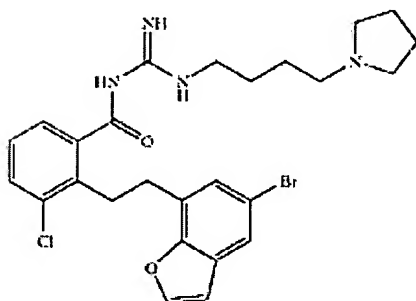
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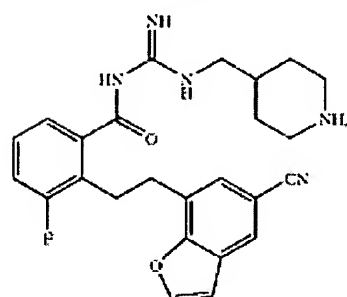
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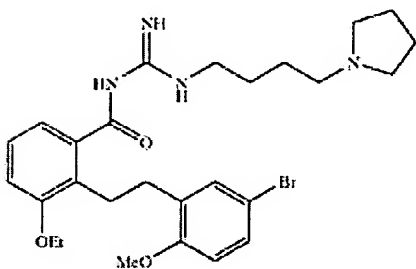
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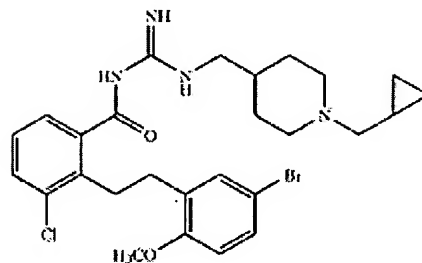
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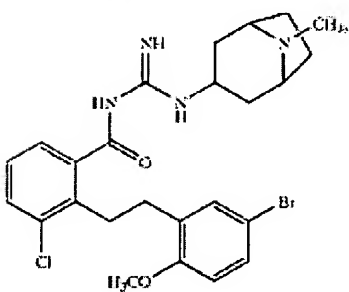
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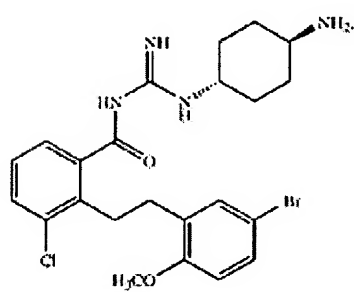
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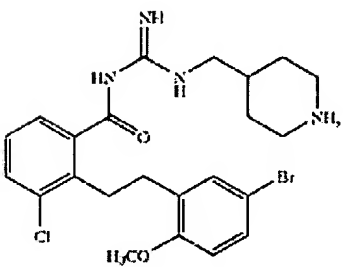
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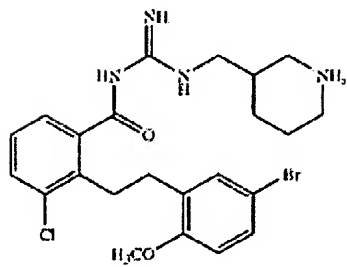
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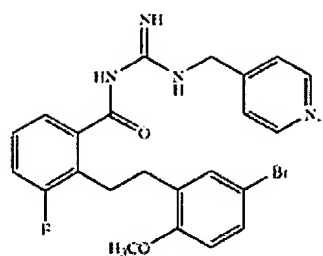
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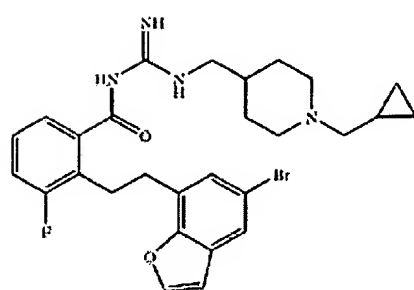
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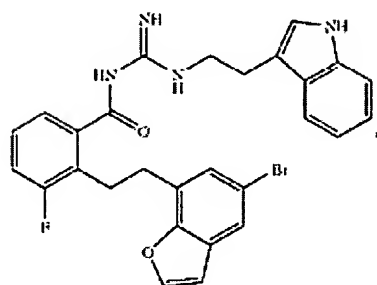
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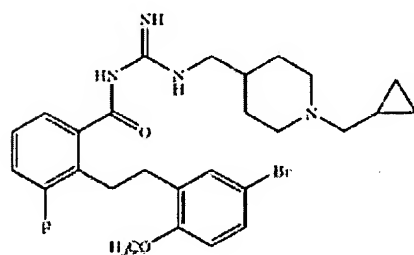
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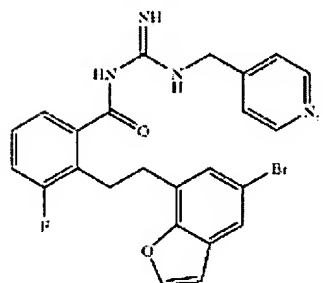
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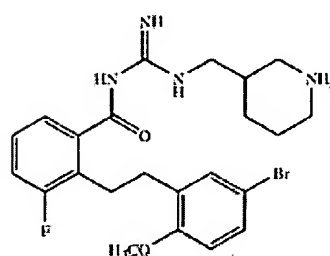
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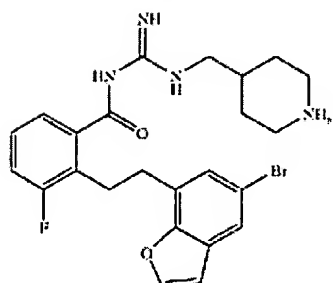
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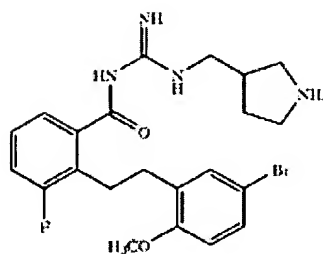
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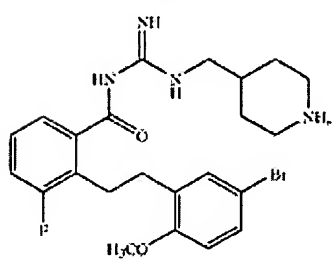
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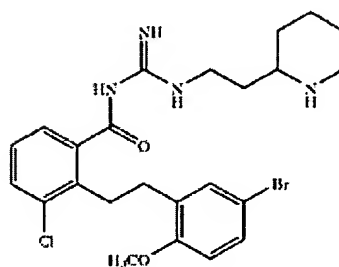
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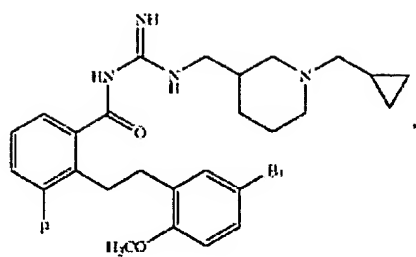
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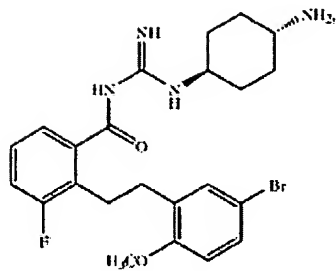
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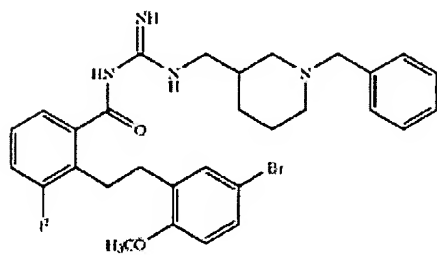
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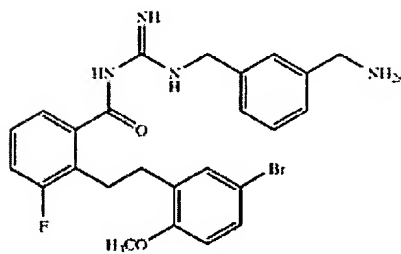
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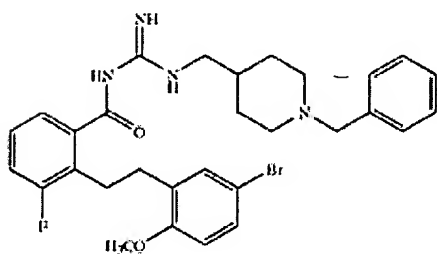
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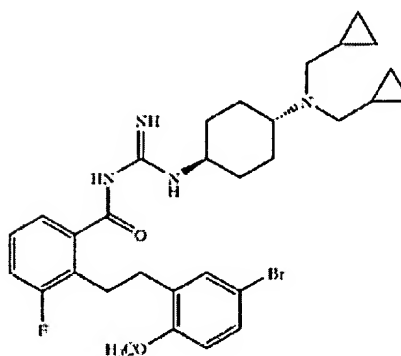
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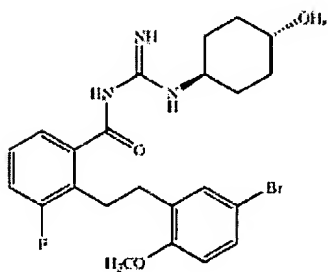
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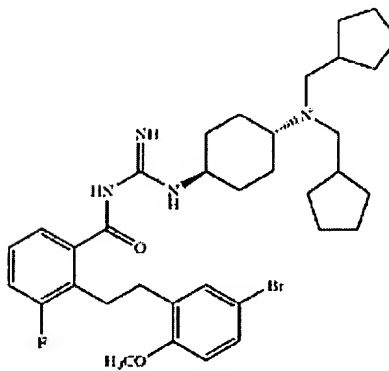
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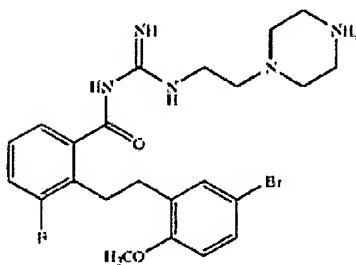
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126



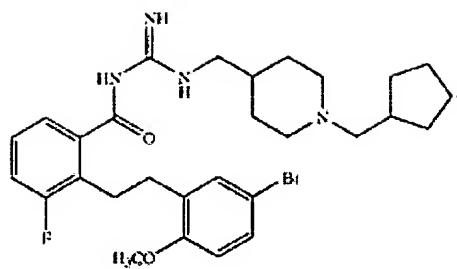
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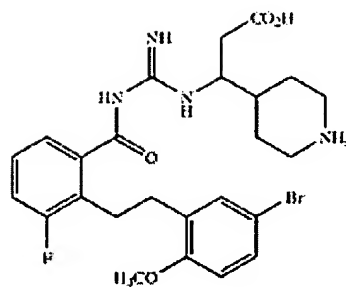
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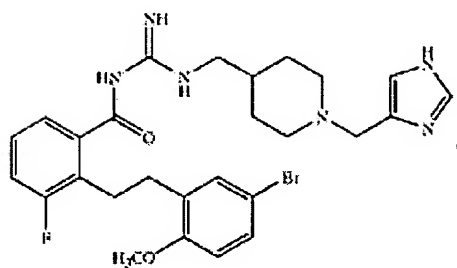
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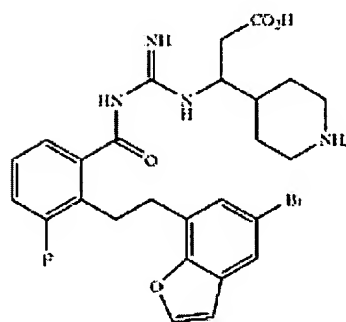
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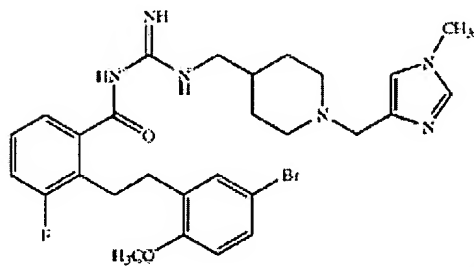
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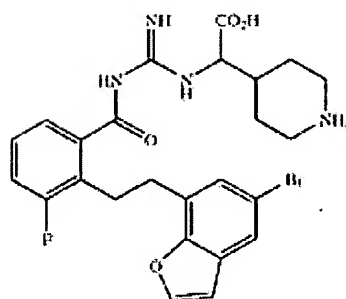
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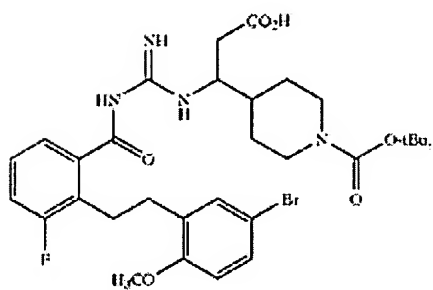
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136

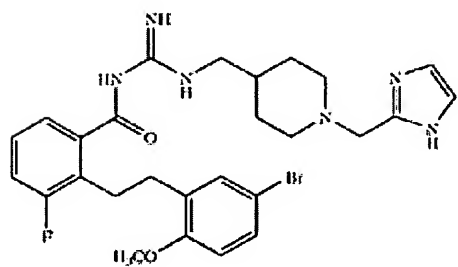
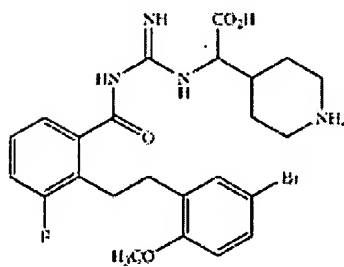


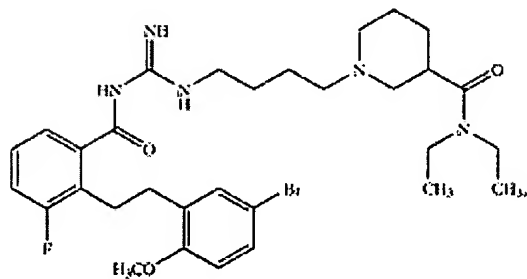
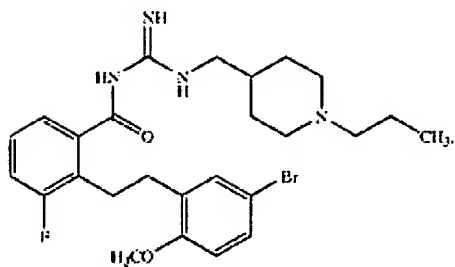
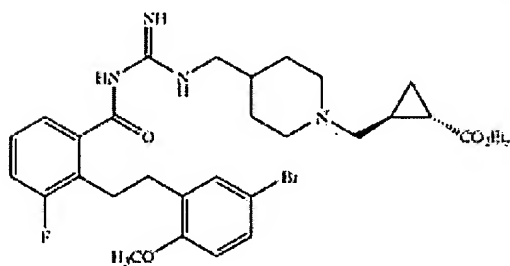
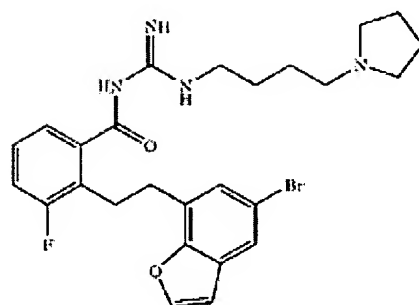
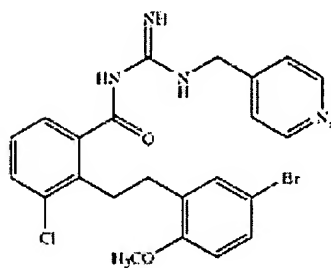
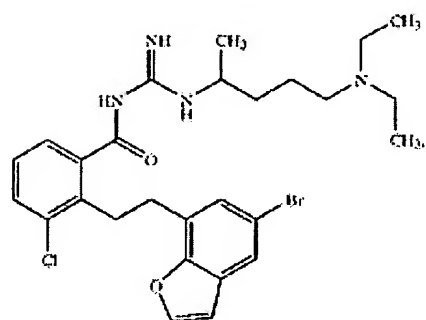
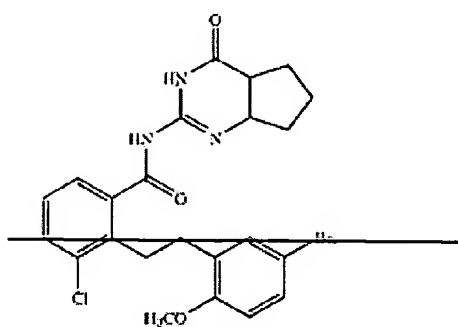
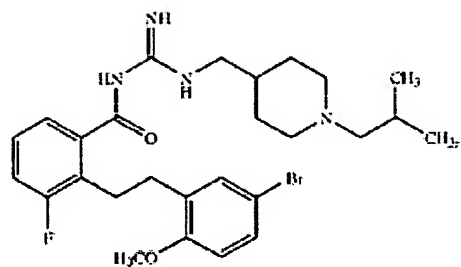
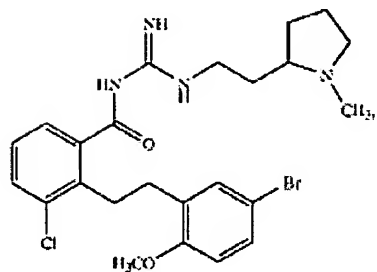
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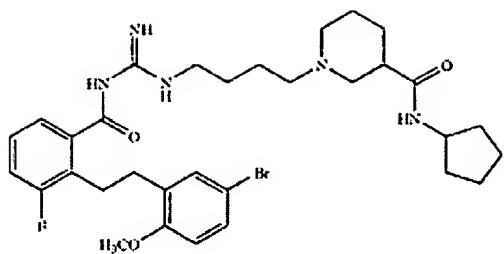


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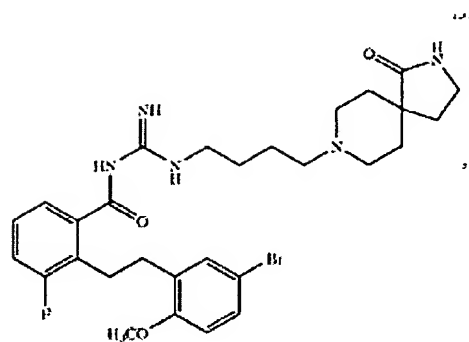
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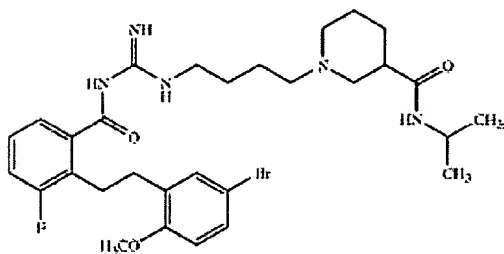




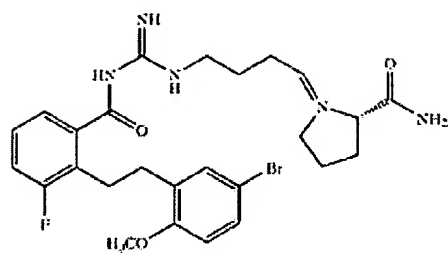
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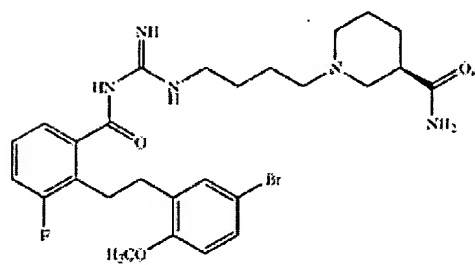
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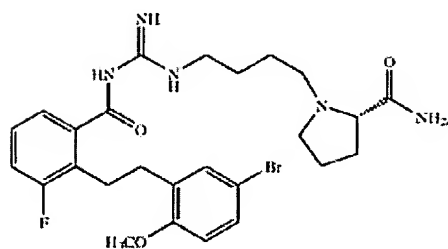
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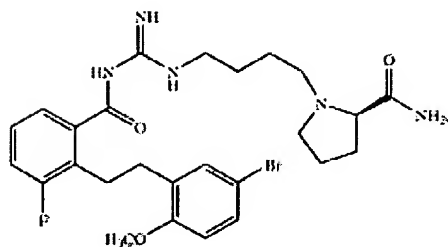
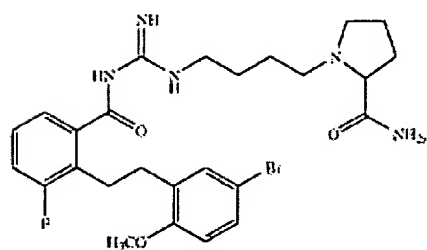
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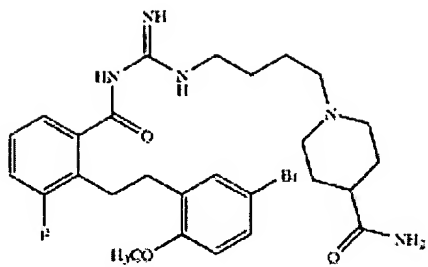


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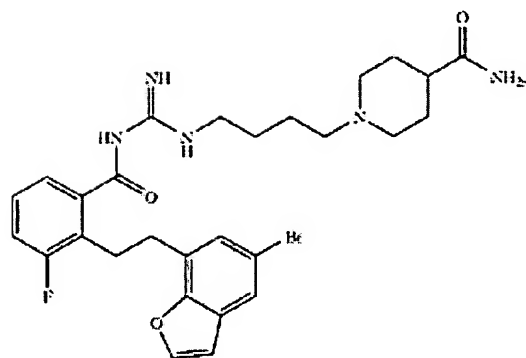


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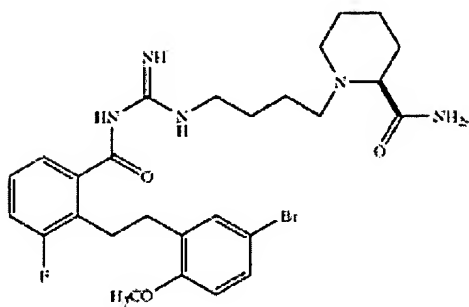




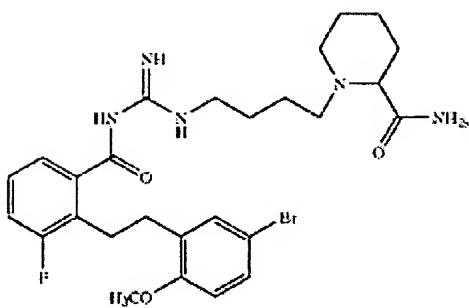
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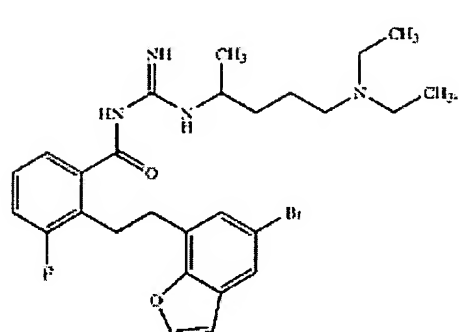
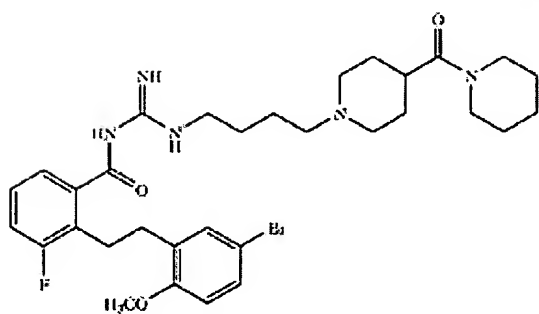
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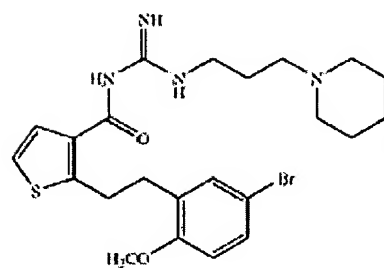
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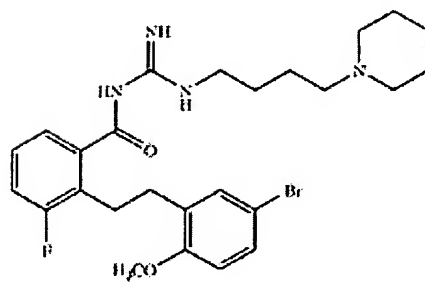
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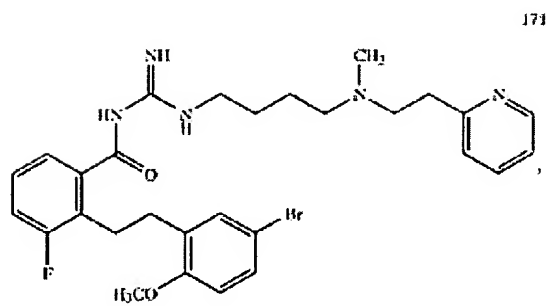
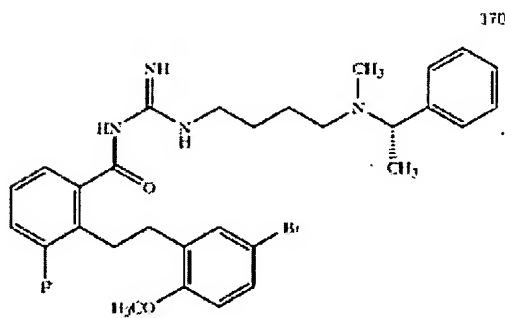
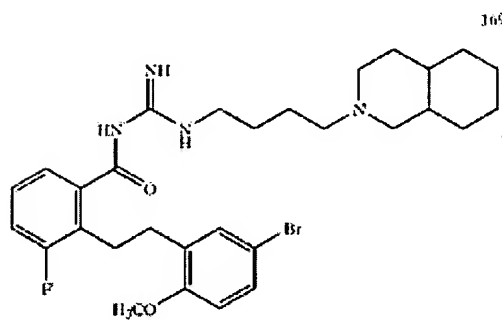
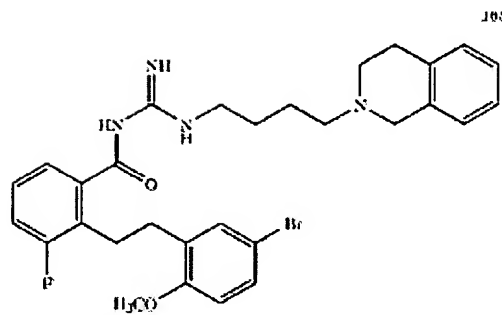
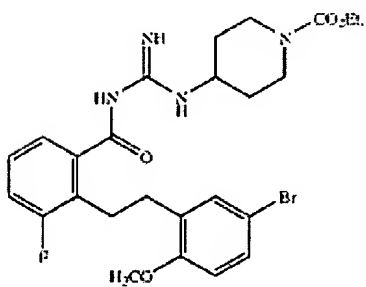
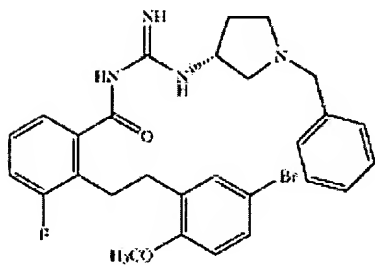
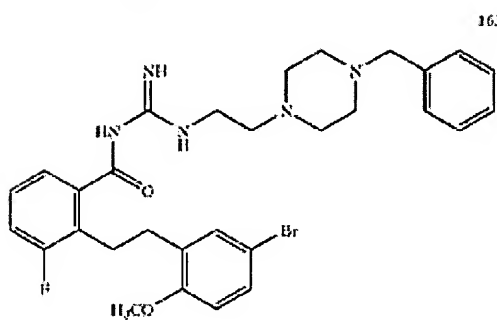
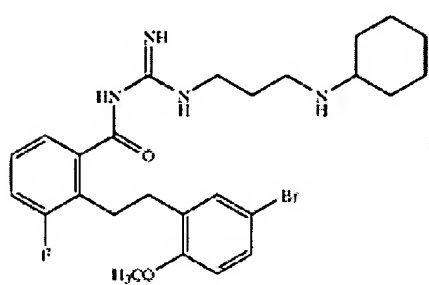
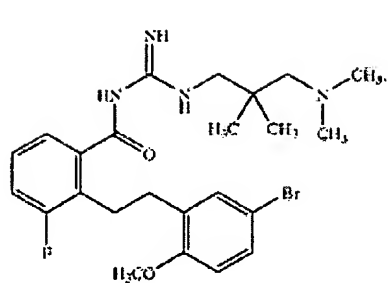
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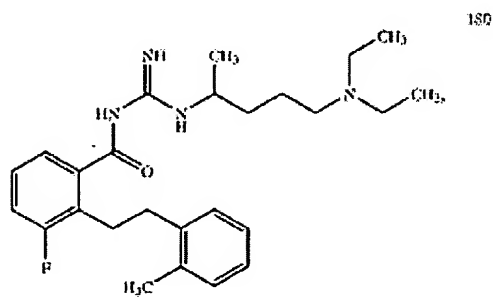
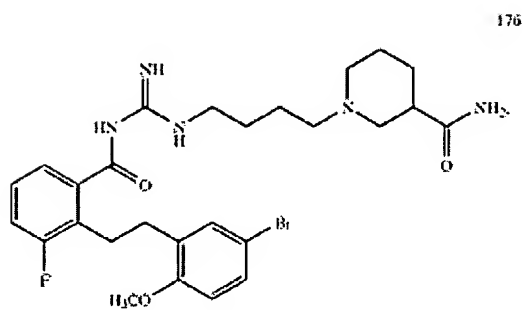
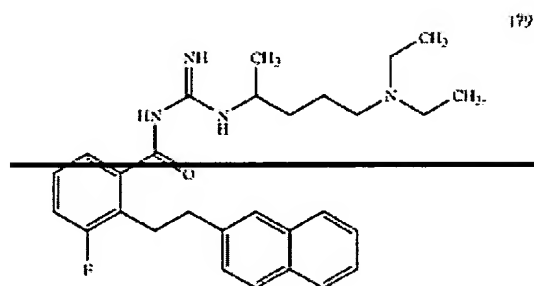
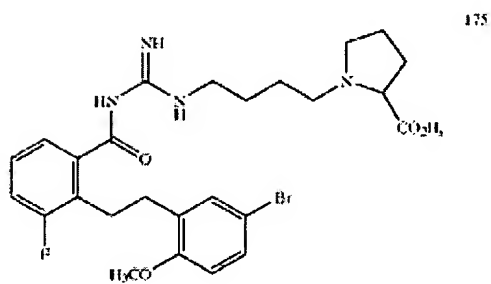
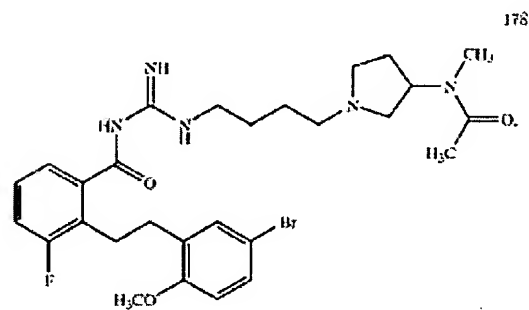
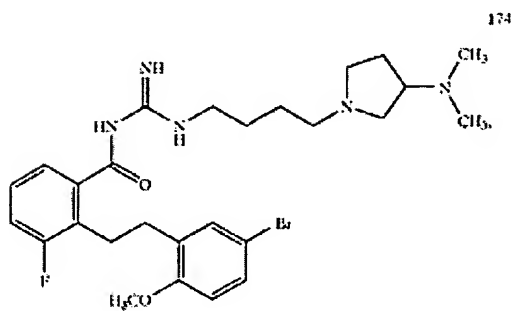
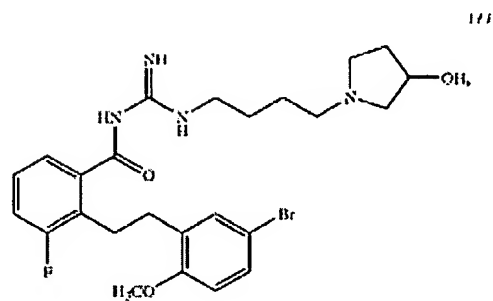
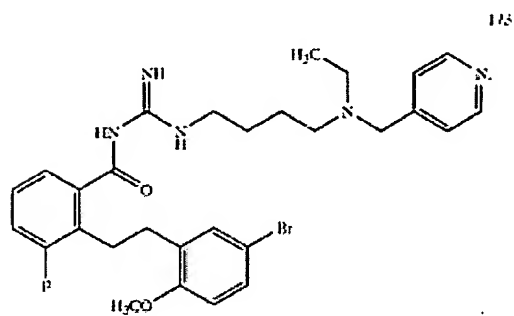


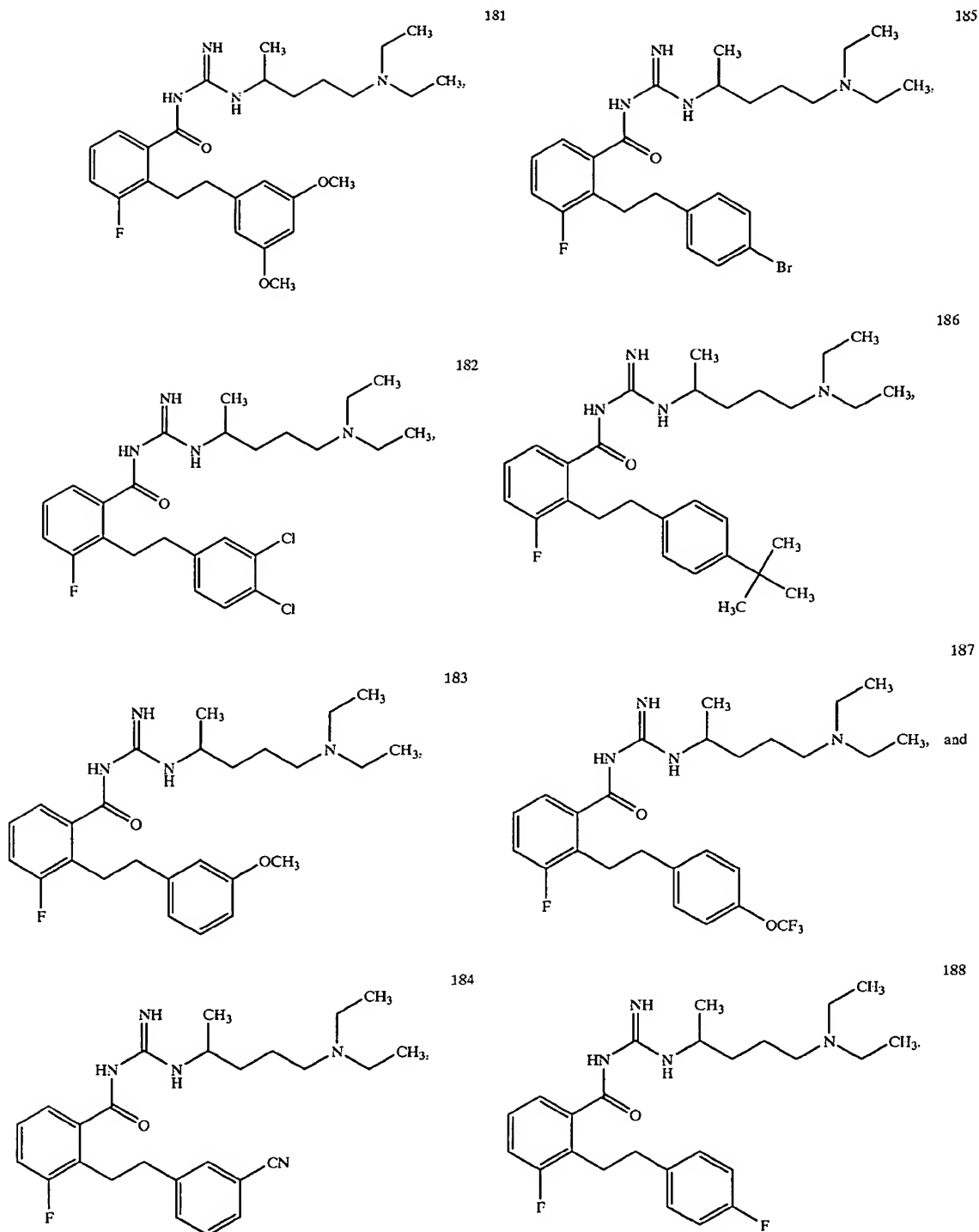
161



162







or a pharmaceutically acceptable salt thereof.

Claim 22. (Presently amended) A pharmaceutical composition comprising a compound according to claim 1 or salt thereof and a pharmaceutically acceptable carrier.

Claim 23. (Withdrawn, presently amended) A method of treating an MC4-R associated disorder in a patient in need thereof comprising administering to said patient a compound or salt of formula (I) in claim 1.

Claim 24. (Withdrawn, presently amended) A method of treating an MC4-R associated disorder in a patient in need thereof comprising administering to said patient a pharmaceutical composition comprising a compound or salt of formula (I) in claim 1.

Claim 25. (Withdrawn, presently amended) A method of treating a weight loss disorder in a subject identified as in need of such treatment comprising administering a compound or salt of formula (I) in claim 1.

Claim 26. (Withdrawn) The method of claim 25, wherein the weight loss disorder is a cachexia, aging involuntary weight loss, catabolic wasting, or anorexia.

Claim 27. (Withdrawn) The method of claim 26, wherein cachexia is cancer cachexia, cardiac cachexia, chronic illness cachexia, or AIDS cachexia.

Claim 28. (Withdrawn, presently amended) A method of treating a bone associated disorder in a subject identified as in need of such treatment comprising administering a compound or salt of formula (I) in claim 1.

Claim 29. (Withdrawn) The method of claim 28, wherein the bone associated disorder is osteoporosis, bone fractures, bone formation associated with surgical procedures, osteogenesis imperfecta, hypophosphatasia, Paget's disease, fibrous dysplasia, osteopetrosis, myeloma bone disease, or the depletion of calcium in bone.

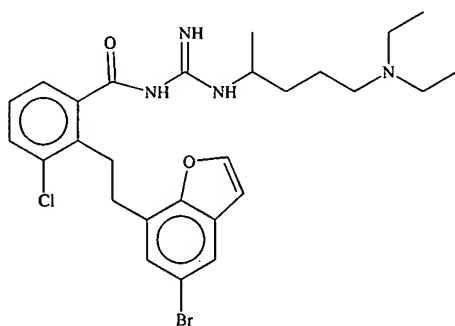
Claim 30. (Withdrawn, presently amended) A method of treating a pain disorder in a subject identified as in need of such treatment comprising administering a compound or salt of formula (I) in claim 1.



Claim 31. (Withdrawn) The method of claim 30, wherein the neuronal disorder is neuropathic pain or allodynia.

Claim 32. (Withdrawn, presently amended) A method of inhibiting MC4-R activity in a patient in need thereof comprising administering to said patient a pharmaceutical composition comprising a compound or salt of formula (I) in claim.

Claim 33. (Previously presented)



or a salt thereof.

Claim 34. (Presently amended) A pharmaceutical composition comprising a compound or salt according to claim 33 and a pharmaceutically acceptable carrier.

Claim 35. (Withdrawn, presently amended) A method of treating an MC4-R associated disorder in a patient in need thereof comprising administering to said patient a compound or salt according to claim 33.